Real Time Vehicle Monitoring

GPS-GSM/GPRS Vehicle Modules

Fuel level Sensors and Adapters

Office PC Based Monitoring System

WEB Based Monitoring System
About
Real Time Monitoring System
About Real Time Monitoring

• Operative monitor vehicle real location, vehicle movement and movement parameters;
• Operative monitor vehicle status and parameters of external sensor;
• Monitor fuel consumption, fueling and fuel drain;
• Monitor driver activity, driver behaviour (eco-driving) and quality of driving;
• Collect information about vehicle movement, driving style, driver activity, fuel consumption, information from external sensors and store it in data base for posterior analyzing.

* – real time monitoring system is based on satellite system of geographical coordinates definition (GPS System) and GSM/GPRS data communication.
* – outside GSM/GPRS coverage, or "GSM network busy” all data stored in modules internal memory for automatic posterior data transmitting.
In general “Real Time” fuel monitoring system consist of next main components:

- Fuel level sensor with digital communication interface (GuardMagic DLLS1 series). Fuel level sensor make measurement of fuel level in fuel tank and send this data to vehicle GPS-GPRS module. (System support up to THREE regular fuel tanks and up to ELEVEN cargo or service fuel tanks);
- Vehicle GPS-GPRS module (GuardMagic VF2 or GuardMagic VB6, VB7, VB8) collect information from fuel sensor and send collected information to monitoring station;
- Monitoring station, - collect the fuel data and other information from vehicle modules, store this information in “Data Base”, make analyzing of received information and generate the series of reports and diagrams.
Monitoring Structure in General

- In vehicle locate GPS-GSM/GPRS module (GuardMagic VF or GuardMagic VB series) that in full automatic mode collect and send to monitoring station information about vehicle location and parameters of vehicle movement, vehicle status, information from external sensors etc.;
- Communication channel (GSM/GPRS+ Internet) for the sending information from vehicle module to "Monitoring Station";
- "Monitoring Station" receive information from all vehicle, store this information in data base, processing information and generate reports and graph about vehicle activity and vehicle status.
GuardMagic “Real Time” vehicle and fuel monitoring system allows:

- company owners, directors, transport managers always have a real information of vehicles and vehicle fleet, vehicle trip, vehicle utilization, vehicle driving parameters, fuel usage;
- watch in real time vehicle location and traffic parameters;
- increase vehicle or special machinery effectiveness;
- minimize non-productive expenses;
- supervise vehicle trip and parameters of movement;
- supervise fuel usage;
- prevent (or minimize) fuel theft;
- supervise vehicle operation time;
- prevent not authorized use of transport;
- supervise drivers working hours and/or operators working hours effectiveness;
- compare vehicle utilization, driving safety and driver behaviour.
Monitoring All types of Vehicle and Machinery

- **Cars, Pickup, SUV**
  - GuardMagic VF2, VB6
  - GuardMagic DAFS1

- **LCV**
  - GuardMagic VF2, VB6
  - GuardMagic DAFS1

- **Minibuses**
  - GuardMagic VF2, VB6
  - GuardMagic DAFS1

- **Trucks**
  - GuardMagic VF2, VB6
  - GuardMagic DLLS1

- **Passenger Buses**
  - GuardMagic VF2, VB6
  - GuardMagic DLLS1

- **Refrigerator Trucks**
  - GuardMagic VB7
  - GuardMagic DTS
  - GuardMagic DLLS1

- **Road Fuel Tanker**
  - GuardMagic VB8
  - GuardMagic DLLE1ct + JBB01

- **Utility and Special Machinery**
  - GuardMagic VF2, VB6, VB7
  - GuardMagic DLLS1

- **Mining Truck, Mining Machinery**
  - GuardMagic VF2, VB6, VB7
  - GuardMagic DLLS1

- **Building Machinery**
  - GuardMagic VF2, VB6
  - GuardMagic DLLS1

- **Road Building Machinery**
  - GuardMagic VF2, VB6
  - GuardMagic DLLS1

- **Agricultural Machinery**
  - GuardMagic VF2, VB6
  - GuardMagic DLLS1

... and much, much more
GuardMagic System Advantages in General

- Monitor all type of vehicle (starting of car and up to road fuel tankers);
- Monitor: vehicle, vehicle driving, fuel, trailers, drivers, sensors;
- Worldwide cover operation;
- Remote monitor by GSM/GPRS network;
- Outside GSM/GPRS network modules stores all information in its memory;
- Real time vehicle location monitoring and parameters of movement;
- Driving safety monitoring and driver behavior monitoring;
- Multi tanks monitoring, up to total 14 fuel tanks for one vehicle;
- Real time monitor fuel level in all fuel tanks: regular and cargo;
- Temperature monitoring;
- External sensors monitoring;
- Generate the lots of reports and graphs for vehicle, fleet, drivers, trailers;
- Universal data communication protocol for all modules;
- System functionality growing
GuardMagic

GPS-GSM/GPRS Vehicle Modules
GuardMagic GPS-GSM/GPRS Vehicle Modules

GuardMagic VF2
Universal compact vehicle GPS/ GSM-GPRS module with fuel monitoring function (multi tanks supports) and acceleration/ deceleration monitoring.

GuardMagic VB6, VB6lite
Universal vehicle GPS/ GSM-GPRS module with fuel monitoring function (multi tanks supports), acceleration/ deceleration monitoring and driver identification function.

GuardMagic VB7, VB7lite
Advanced vehicle GPS/ GSM-GPRS module with fuel monitoring function (multi tanks supports), temperature monitoring, acceleration/ deceleration monitoring and driver identification function. Module has TWO digital fuel bus (EIA-485).

GuardMagic VB8
Special GPS/ GSM-GPRS module dedicated to use in road fuel tankers. Module allow to monitor fuel level up to 11 cargo fuel compartments and monitor fuel quality in SIX compartments. Module has: driver identification function, TWO digital fuel bus (EIA-485).
Advantages Of GuardMagic Vehicle Modules

- installation on any type of transport (truck, lorry, car, road tanker, combine, tractor, bulldozer, building and special machinery etc.);
- connection to external logical sensors;
- in full automatic mode collect and transmit to monitoring station information about vehicle location, parameters of vehicle moving, active driver, driving style, status and information from of external sensors;
- outside GSM coverage store all information in internal non-volatile memory and posterior in full automatic transmit stored information to monitoring station;
- Internal memory for about 110 Thousands record;
- multi tanks support functionality (independently monitor many fuel tanks);
- high fuel resolution: 1024 or 4096 levels;
- digital communication interface with fuel level sensors (very high noise protection);
- monitor fuel temperature in fuel tanks;
- driver identification function;
- monitor driver behaviour (eco-driving) and quality of driving;
- Immobilization function (based on driver ID);
- remote engine start blocking (engine blocking) functionality;
- several operation mode: transport, special machinery, active stand by, sleep;
- protection of power circuit and signal against an over voltage and over polarity;
- and much more...
GuardMagic VF2: universal compact vehicle GPS/GSM-GPRS module with fuel monitoring function (multi tanks supports) and acceleration/deceleration monitoring.

GuardMagic VF2 module designed for remote supervision of mobile object movement (vehicle, special machinery, etc.) and remote fuel monitoring.

Module supports up to THREE regular fuel tanks.

Module has internal memory for 110 Thousands records (if GSM signal is absent).

GuardMagic VF2 benefit:

- adaptive data fixing;
- transmit vehicle movement parameters: speed, acceleration, deceleration;
- safety and eco-driving support;
- multi tanks support functionality;
- support up to THREE fuel level sensors with digital communication interface (THREE regular fuel tanks);
- or support ONE analog fuel level sensor (ONE regular fuel tank);
- digital industrial communication interface with fuel level sensors (EIA-485);
- collect information from fuel level sensors: fuel level and temperature;
- high resolution in fuel bus (1024 or 4096 levels);
- fuel bus status diagnostic;
- internal non-volatile memory for the about 110 thousands of records;
- programmed active stand-by mode.
GuardMagic VF2 Main Functionality

Main:
- Coordinates definition (GPS position) and parameters of vehicle movement;
- Transmitting by GSM/GPRS network to the Monitoring Station coordinates of truck, parameters of movement, fuel level in truck fuel tanks, engine On-Off status, panic button pressing;
- Storing the GPS data and data from external sensor and circuits in internal non-volatile memory and posterior transmitting this information by GSM/GPRS to monitoring station;
- Automatic storing data in internal memory than GPRS connection is absent;
- Automatic starting sending data from memory than GPRS connection appear;
- Two types of mode:
  - operation mode;
  - programming mode.
- Two types of working in operation mode:
  - transport mode;
  - special machinery mode;
- Three type of operation;
  - “operation”;
  - “ active stand by”; 
  - “sleeping”
- Programming the periodicity of data fixing;
- User programming module configuration;
- Remote engine starting blocking;
- Remote module reprogramming.

Others:
- Transition in “active stand by” mode and “sleep mode” after deenergizing Ignition;
- Automatic activation from “active stand by” mode or "sleep mode" in case of at activation of any logical inputs;
- Protection of power circuit and signal against an over voltage;
- Satellite time synchronization;
GuardMagic VF2 Connection and Operation

Main circuits connection:
- Main power supply (DC power 12/24V);
- GPS antenna-receiver (from complete set);
- Ignition circuit;
- Up to THREE fuel level sensor in main fuel tanks (digital interface EIA-485);
- or ONE analog fuel level sensor;
- “PANIC” (SOS) Button;
- Engine start blocking relay.
About GuardMagic VB6, VB6lite Modules

GuardMagic VB6: universal vehicle GPS/ GSM-GPRS module with fuel monitoring function (multi tanks support), acceleration/deceleration monitoring and driver identification function.

GuardMagic VB6 module designed for remote supervision of mobile object movement (vehicle, special machinery, etc.), vehicle status monitoring, fuel in regular tanks monitoring and active driver monitoring.
Module supports up to THREE regular fuel tanks.
Module has internal memory for 110 Thousand records (if GSM signal is absent).

GuardMagic VB6 benefit:

- adaptive data fixing;
- transmit vehicle movement parameters: speed, acceleration, deceleration;
- safety and eco-driving support;
- multi tanks support functionality;
- support up to THREE fuel level sensors with digital communication interface (THREE regular fuel tanks)
- driver identification;
- digital industrial communication interface with all fuel level sensors (EIA-485);
- collect information from fuel level sensors: fuel level and temperature;
- high resolution in fuel bus (1024 or 4096 levels);
- external sensors monitoring;
- fuel bus status diagnostic;
- internal non-volatile memory for the about 110 thousands of records;
- programmed active stand-by mode.
GuardMagic VB6 Main Functionality

**Main:**
- Coordinates definition (GPS position) and parameters of vehicle movement;
- Transmitting by GSM/GPRS network to the Monitoring Station coordinates of truck, parameters of movement, fuel level in regular fuel tanks, engine On-Off status, panic button pressing, event button pressing, engine RPM, engine overheat, status of alarm system;
- Storing the GPS data and data from external sensor and circuits in internal non-volatile memory and posterior transmitting this information by GSM/GPRS to monitoring station;
- Automatic storing data in internal memory than GPRS connection is absent;
- Automatic starting sending data from memory than GPRS connection appear;
- Driver identification;
- Guard function;
- Immobilization function (by driver ID);
- Two types of mode:
  - operation mode, programming mode.
- Two types of working in operation mode:
  - transport mode, special machinery mode;
- Three type of operation;
  - “operation”, “active stand by”, “sleeping”;
- Programming the periodicity of data fixing;
- Programming the module configuration;
- Remote engine starting blocking;
- Remote On/Off customer relay;
- Remote module reprogramming.

**Others:**
- Transition in “active stand by” mode and “sleep mode” after deenergizing Ignition;
- Automatic activation from “active stand by” mode or "sleep mode" in case of at activation of any logical inputs;
- Protection of power circuit and signal against an over voltage;
- Satellite time synchronization;
GuardMagic VB6 Module Connection

**Main circuits connection:**
- Main power supply;
- External reserve battery;
- GPS antenna-receiver (from complete set);
- Ignition circuit;
- Up to THREE fuel level sensor in truck regular fuel tanks (EIA-485);
- Driver identification reader;
- Truck alarm system;
- "PANIC" button;
- "Event" button;
- Vehicle Engine RPM sensor (circuit),
- Crash sensor, fuel tank empty sensor, engine overheat sensor;
- External buzzer;
- Engine start blocking relay;
- Customer relay.
About GuardMagic VB7, VB7lite Modules

GuardMagic VB7: universal vehicle GPS/ GSM-GPRS module with fuel and temperature monitoring function, acceleration/deceleration monitoring and driver identification function

GuardMagic VB7 module designed for remote supervision of mobile object movement (vehicle, special machinery, etc.), vehicle status monitoring, fuel in regular and service tanks monitoring and active driver monitoring. Module supports up to THREE regular fuel tanks and up to FOUR service (cargo) tanks; Module has internal memory for 110Thousand records (if GSM signal is absent).

GuardMagic VB7 benefit:

- adaptive data fixing;
- transmit vehicle movement parameters: speed, acceleration, deceleration;
- safety and eco-driving support;
- multi tanks support functionality(THREE in regular fuel tanks and FOUR sensors in service tanks);
- support up to SEVEN temperature sensors;
- driver identification;
- two digital communication interface EIA-485 for communication with fuel level sensors;
- collect information from fuel level sensors: fuel level and temperature;
- high resolution in fuel bus (1024 or 4096 levels);
- external sensors monitoring;
- fuel bus status diagnostic;
- internal non-volatile memory for the about 110 thousands of records;
- programmed active stand-by mode.
GuardMagic VB7 Main Functionality

Main:
- Coordinates definition (GPS position) and parameters of vehicle movement;
- Transmitting by GSM/GPRS network to the Monitoring Station coordinates of truck, parameters of movement, fuel level in regular and service fuel tanks, temperature information from temperature sensors, engine On-Off status, panic and event buttons pressing, engine RPM, engine overheat, status of alarm system;
- Storing the GPS data and data from external sensor and circuits in internal non-volatile memory than GPRS connection is absent and posterior transmitting this information to monitoring station;
- Automatic starting sending data from memory than GPRS connection appear;
- Driver identification;
- Guard function;
- Immobilization function (by driver ID);
- Two types of mode:
  - operation mode, programming mode.
- Two types of working in operation mode:
  - transport mode, special machinery mode;
- Three type of operation;
  - “operation”, “active stand by”, “sleeping”;
- Programming the periodicity of data fixing;
- Programming the module configuration;
- Remote engine starting blocking;
- Remote On/Off customer relay;
- Remote module reprogramming.

Others:
- Transition in “active stand by” mode and “sleep mode” after deenergizing Ignition;
- Automatic activation from “active stand by” mode or "sleep mode" in case of at activation of any logical inputs;
- Protection of power circuit and signal against an over voltage;
- Satellite time synchronization;
GuardMagic VB7 Module Connection

**Main circuits connection:**
- Main power supply;
- External reserve battery;
- GPS antenna-receiver (complete set);
- Ignition circuit;
- Up to THREE fuel level sensor in truck regular fuel tanks (EIA-485);
- Up to FOUR fuel level sensor in service fuel tanks (EIA-485);
- Up to SEVEN temperature sensors by 1-wire interface;
- Driver identification reader;
- Truck alarm system;
- “PANIC” and “Event” buttons;
- Engine RPM sensor, crash sensor, fuel tank empty sensor, engine overheat sensor;
- External buzzer;
- Engine start blocking relay;
- Customer relay.
GuardMagic VB8: special compact tanker-truck GPS/ GSM-GPRS module dedicated to use on tanker-truck application.

GuardMagic VB8 module designed for remote supervision of road fuel tankers and its fuel compartments.

GuardMagic VB8 module monitor: tanker movement and tanker status, fuel in cargo tanks and regular truck tanks, fuel quality in cargo tanks, driving safety, active driver, active trailer. Module supports up to THREE truck regular fuel tanks and up to ELEVEN cargo compartments; Module has internal memory for 110 Thousand records for storing data (if GSM signal is absent).

GuardMagic VB8 benefit:
- multi tanks support functionality;
- independently monitor fuel level up to 11 fuel cargo compartments and up to 3 truck fuel tanks;
- independently monitor fuel quality (density/viscosity) in up to SIX fuel cargo compartments;
- two digital communication interface EIA-485 with fuel level sensors and fuel quality sensor;
- high resolution in fuel bus (1024 or 4096 levels);
- support up to SEVEN temperature sensors;
- driver identification;
- trailer identification;
- adaptive data fixing;
- transmit vehicle movement parameters: speed, acceleration, deceleration;
- safety and eco-driving support;
- synthetic ignition;
- fuel bus status diagnostic;
- internal non-volatile memory for the about 110 thousands of records;
- programmed active stand-by mode.
GuardMagic VB8 Main Functionality

Main:
- Coordinates definition (GPS position) and parameters of vehicle movement;
- Transmitting by GSM/GPRS network to the “Monitoring Station” coordinates of fuel tanker, parameters of movement, fuel level in cargo compartments and truck regular fuel tanks, fuel quality in cargo compartments, temperature information from temperature sensors, engine On-Off status, panic and event buttons pressing, engine RPM, engine overheat, status of alarm system;
- Storing the GPS data and data from external sensors and circuits in internal non-volatile memory than GPRS connection is absent and posterior transmitting this information to monitoring station;
- Automatic starting sending data from memory than GPRS connection appear;
- Driver identification and trailer identification;
- Guard function;
- Immobilization function (by driver ID);

- Two types of mode:
  - operation mode, programming mode.
- Two types of working in operation mode;
- Three type of operation;
  - “operation”, “active stand by”, “sleeping”; 
- Programming the periodicity of data fixing;
- Programming the module configuration;
- Remote engine starting blocking;
- Remote On/Off customer relay;
- Remote module reprogramming.

Others:
- two steps over speed sound notification;
- Transition in “active stand by” mode and “sleep mode” after deenergizing Ignition;
- Automatic activation from “active stand by” mode or "sleep mode" in case of at activation of any logical inputs;
- Protection of power circuit and signal against an over voltage;
- Satellite time synchronization;
GuardMagic VB8 Module Connection

Main circuits connection:
- Up to ELEVEN fuel level sensor in cargo fuel tank compartments (EIA-485);
- Up to THREE fuel level sensor in truck regular fuel tanks (EIA-485);
- Up to SIX fuel quality sensors (EIA-485);
- Up to SEVEN temperature sensors by 1-wire interface;
- Driver identification reader;
- Trailer identification module;
- Truck alarm system;
- Main power supply;
- External reserve battery;
- Ignition circuit;
- GPS antenna-receiver (from complete set);
- “PANIC” and “Event” buttons;
- Engine RPM sensor, crash sensor, fuel tank empty sensor, engine overheat sensor;
- External buzzer;
- Engine start blocking relay;
- Customer relay.
Driver Identification by i-Button

for modules GuardMagic VB6, Guardmagic VB7, GuardMagic VB8

The iButton® (by Maxim/Dallas Semiconductor) device is a computer chip enclosed in a robust stainless steel can. Each iButton® device has a unique and unalterable code laser etched onto its chip inside the can. This code used as a key or identifier for each iButton device.

The silicon chip within the iButton device is protected by the ultimate durable material: stainless steel. You can drop an iButton device, step on it, or scratch it. The iButton device is wear-tested for 10-year durability.

Driver has its own iButton® and iButton code is the ID code of driver in monitoring system.

By simply touching iButton® device to iButton Reader (Touch Pad) GuardMagic VB module read this code (driver ID code) and send this code to monitoring station.

Using ID driver code allow to add additional immobilization function in the vehicle: only reading the correct ID code (authorized driver) allow to start the vehicle engine.
GuardMagic
Fuel Level Sensors and Sensor Adapters
GuardMagic Fuel Sensor Related Products

**GuardMagic DAFS1**: adapter for resistive type floating fuel level sensor with EIA-485 communication interface. GuardMagic DAFS allow by very economical way embed fuel monitoring function for cars, SUV, VANs, LCV in vehicle monitoring system.

**GuardMagic DLLS1 series**: robust digital fuel level sensor (for operation in vehicle regular fuel tanks).
- available sensor length: from 0,3m and up to 2,5m;
- multi tanks support functionality
- digital communication interface EIA-485;
- internal data processing;
- robust construction.

**GuardMagic DLLE1ct series**: robust digital fuel level sensor for operation in hazardous area (for road fuel tanker cargo tanks).
- available sensor length: from 1,3m and up to 2,5m;
- multi tanks support functionality
- digital communication interface EIA-485;
- internal data processing;
- robust construction.
In Brief
About PC Monitoring Software/Service Functionality
About Monitoring Software and Monitoring Service

All World Coverage and All World Operation
About Monitoring Software and Monitoring Service
(VehicleStation, FleetStation: “Main Operation” Window)
About Monitoring Software and Monitoring Service
(VehicleStation, FleetStation: “Main Operation” Window)
About Monitoring Software and Monitoring Service (VehicleStation, FleetStation: “Chart” Window)
About Monitoring Software and Monitoring Service
(PowerTrace Service: “Main Operation” Window)
About Monitoring Software and Monitoring Service
(Some Samples)

Vehicle Real Status

- Device type: GuardMagic
- Unique ID: 1310020
- Phone: +27834193216
- Last message: 2014-06-17 15:37:22 (9 minutes 16 seconds ago)
- Location: H.F. Verwoerd Road, Vereeniging, ZA
- Speed: 45 km/h
- Acceleration (max): 2.05 m/sec²
- Deceleration (max): 1.90 m/sec²
- Diesel level: 52.70 litres
- Diesel level: 74.44 litres
- FST1: 26.00 °C
- FST2: 32.00 °C
- Fuel Bus Failure: Off
- Ignition: Off

Road Fuel Tanker Real Status

- Unique ID: 1200413
- Phone: ----
- Last message: 2012-09-14 17:04:50 (2 hours 31 minutes ago)
- Location: Murtala Mohammed Way, Lagos, NG
- Speed: 0 km/h
- Altitude: 0
- Mileage counter: 191.7 km
- Engine hours counter: 17 h
- Cargo tank 1: 2270.27 litres
- Cargo Tank 2: 2311.63 litres
- Cargo Tank 3: 1974.36 litres
- Event: Off
- GPS Alarm: Off
- Ignition: Off
- Input1: On
- Main Power Alarm: Off

GuardMagic
vehicle and fuel monitoring
About Monitoring Software and Monitoring Service
(Some Samples)

Vehicle Real Trip

Vehicle Real Trip

Vehicle Real Trip

Agricultural Combain in Field
About Monitoring Software and Monitoring Service
(Some Samples)

Vehicle Speed Graph

Vehicle Acceleration/Deceleration Graph

Fuel in Tanks Graph

Fueling Graph
About Monitoring Software and Monitoring Service (Some Samples)

Fuel Draining Graph

Vehicle General Activity

Daily Driving Graph

Daily Activity Graph
About Monitoring Software and Monitoring Service 
(Some Samples)

Fuel Daily Consumption Graph

Vehicle Active Driver Report

<table>
<thead>
<tr>
<th>Date Time</th>
<th>iButton code</th>
<th>Name</th>
<th>Pers ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-09-2014 0:09:26</td>
<td>000014FD1E81</td>
<td>Kenny Ken</td>
<td></td>
</tr>
<tr>
<td>17-09-2014 1:33:18</td>
<td>n/a</td>
<td>Kenny Ken</td>
<td></td>
</tr>
<tr>
<td>17-09-2014 3:38:48</td>
<td>000014FD1E81</td>
<td>Kenny Ken</td>
<td></td>
</tr>
<tr>
<td>17-09-2014 4:33:19</td>
<td>000014FD1E81</td>
<td>Kenny Ken</td>
<td></td>
</tr>
<tr>
<td>17-09-2014 5:23:25</td>
<td>n/a</td>
<td>Kenny Ken</td>
<td></td>
</tr>
<tr>
<td>17-09-2014 5:54:06</td>
<td>000014FD1E81</td>
<td>Kenny Ken</td>
<td></td>
</tr>
<tr>
<td>17-09-2014 6:03:50</td>
<td>n/a</td>
<td>Kenny Ken</td>
<td></td>
</tr>
<tr>
<td>17-09-2014 6:11:53</td>
<td>000014FD1E81</td>
<td>Kenny Ken</td>
<td></td>
</tr>
</tbody>
</table>

Detailed Starting Condition Report

General Events Report

<table>
<thead>
<tr>
<th>Date Time</th>
<th>Start Type</th>
<th>First Name</th>
<th>Surname</th>
<th>Pers ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-09-2014 0:09:26</td>
<td>correct driver</td>
<td>Kenny</td>
<td>Ken</td>
<td>010256-11111</td>
</tr>
<tr>
<td>17-09-2014 1:33:18</td>
<td>without identification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-09-2014 3:38:48</td>
<td>correct driver</td>
<td>Kenny</td>
<td>Ken</td>
<td>010256-11111</td>
</tr>
<tr>
<td>17-09-2014 4:33:19</td>
<td>correct driver</td>
<td>Kenny</td>
<td>Ken</td>
<td>010256-11111</td>
</tr>
<tr>
<td>17-09-2014 5:23:25</td>
<td>without identification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-09-2014 5:54:06</td>
<td>without identification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-09-2014 6:03:50</td>
<td>without identification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-09-2014 6:11:53</td>
<td>correct driver</td>
<td>Kenny</td>
<td>Ken</td>
<td>010256-11111</td>
</tr>
<tr>
<td>17-09-2014 6:39:03</td>
<td>without identification</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Operating Period (Calendar Days): 0
Operating Days per Period: 1
Distance: 231.932 km
Summary Working Time (hh:mm:ss): 23:59:54
Summary Effective Time (hh:mm:ss): 4:13:03

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Button</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>Overheat</th>
<th>Wrong Start</th>
<th>No Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-09-2014</td>
<td>00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

GuardMagic
vehicle and fuel monitoring
About Monitoring Software and Monitoring Service
(Some Samples)

General

<table>
<thead>
<tr>
<th>Vehicle Name:</th>
<th>hbbholding.com</th>
<th>Model:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Number:</td>
<td>XH1024</td>
<td>Group:</td>
</tr>
<tr>
<td>Time Period:</td>
<td>2010-01-11 00:00:00 - 2010-01-18 00:00:00</td>
<td></td>
</tr>
</tbody>
</table>

OPERATION
Operating Period (Calendar Days): 7
Operating Days (Working Days): 5

DISTANCE
Trip Distance: 348.939 km

TIME
Summary Effective Time (hh:mm:ss): 99:12:35
Summary Driving Time (hh:mm:ss): 9:19:34
Summary Idle Time (hh:mm:ss): 7:48:55
Summary Stand Time (hh:mm:ss): 9:52:41

PRODUCTIVITY
Using the Working Time: 77 percent
Effectiveness per period: 11 percent

EVENTS
Event Button Pressed (qty): 0
L1 activation (qty): 0
L2 activation (qty): 0
L3 activation (qty): 0

NOT REGULAR SITUATION
Engine Overheat (qty): 0
Attempt To Start With Wrong Authorization (qty): 0
Attempt To Start Without Authorization (qty): 0

Consolidated

Operating Period (Calendar Days): 31
Operating Days per Period: 21
Distance: 599.308 km
Summary Working Time (hh:mm:ss): 80:00:57
Summary Effective Time (hh:mm:ss): 32:12:11

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Starting</th>
<th>Work Finishing</th>
<th>Work Time</th>
<th>Distance (km)</th>
<th>Effective Time</th>
<th>Driving Time</th>
<th>Stand Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/01/2010</td>
<td>12:00:00</td>
<td>12:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>13/01/2010</td>
<td>13:00:00</td>
<td>13:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>14/01/2010</td>
<td>14:00:00</td>
<td>14:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>15/01/2010</td>
<td>15:00:00</td>
<td>15:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>16/01/2010</td>
<td>16:00:00</td>
<td>16:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>17/01/2010</td>
<td>17:00:00</td>
<td>17:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>18/01/2010</td>
<td>18:00:00</td>
<td>18:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>19/01/2010</td>
<td>19:00:00</td>
<td>19:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
<tr>
<td>20/01/2010</td>
<td>20:00:00</td>
<td>20:30:00</td>
<td>2:30:00</td>
<td>4:06:00</td>
<td>0:30:12</td>
<td>0:18:37</td>
<td>0:12:35</td>
</tr>
</tbody>
</table>

Utilization

<table>
<thead>
<tr>
<th>Date</th>
<th>Using of Working Time</th>
<th>Effectiveness</th>
<th>Operating Time</th>
<th>Effective Time</th>
<th>Driving Time</th>
<th>Idle Time</th>
<th>Parking Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/01/2010</td>
<td>10:38%</td>
<td>2.17%</td>
<td>2.37:25</td>
<td>0:31:12</td>
<td>0:18:37</td>
<td>0:08:01</td>
<td>1</td>
</tr>
<tr>
<td>13/01/2010</td>
<td>49.83%</td>
<td>15.77%</td>
<td>11:57:34</td>
<td>3:47:03</td>
<td>2:04:33</td>
<td>2:38:07</td>
<td>9</td>
</tr>
<tr>
<td>14/01/2010</td>
<td>48.88%</td>
<td>19.73%</td>
<td>10:43:23</td>
<td>4:44:05</td>
<td>0:31:47</td>
<td>2:45:05</td>
<td>7</td>
</tr>
<tr>
<td>16/01/2010</td>
<td>49.34%</td>
<td>16.64%</td>
<td>11:50:29</td>
<td>3:59:40</td>
<td>2:31:43</td>
<td>1:15:52</td>
<td>6</td>
</tr>
<tr>
<td>17/01/2010</td>
<td>54.23%</td>
<td>16.26%</td>
<td>13:00:54</td>
<td>3:54:10</td>
<td>2:13:28</td>
<td>0:21:41</td>
<td>3</td>
</tr>
<tr>
<td>18/01/2010</td>
<td>48.63%</td>
<td>25.13%</td>
<td>11:40:16</td>
<td>6:01:54</td>
<td>4:14:13</td>
<td>0:36:52</td>
<td>3</td>
</tr>
<tr>
<td>20/01/2010</td>
<td>11.43%</td>
<td>8.82%</td>
<td>2:44:40</td>
<td>2:07:04</td>
<td>1:08:36</td>
<td>0:09:39</td>
<td>1</td>
</tr>
</tbody>
</table>

Fuel Usage

OPERATION
Operating Period (Calendar Days): 31
Operating Days (Working Days): 1

DISTANCE
Trip Distance: 0.447 km

<table>
<thead>
<tr>
<th>FUEL TANK 1</th>
<th>Initial volume: 0.0 litres</th>
<th>Final volume: 0.0 litres</th>
<th>Minimal volume: 0.0 litres</th>
<th>Maximum volume: 0.0 litres</th>
<th>Fueling volume: 0.0 litres</th>
<th>Fuel drain: -25.0 litres</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUEL TANK 2</td>
<td>Initial volume: 0.0 litres</td>
<td>Final volume: 10.0 litres</td>
<td>Minimal volume: 0.0 litres</td>
<td>Maximum volume: 10.0 litres</td>
<td>Fueling volume: 20.0 litres</td>
<td>Fuel drain: -25.0 litres</td>
</tr>
<tr>
<td>TOTAL FUEL</td>
<td>Initial volume: 0.0 litres</td>
<td>Final volume: 10.0 litres</td>
<td>Minimal volume: 0.0 litres</td>
<td>Maximum volume: 10.0 litres</td>
<td>Fueling volume: 20.0 litres</td>
<td>Fuel drain: -25.0 litres</td>
</tr>
</tbody>
</table>

FUEL TANK 3
Initial volume: 0.0 litres
Final volume: 0.0 litres
Minimal volume: 0.0 litres
Maximum volume: 0.0 litres
Fueling volume: 0.0 litres
Fuel drain: 0.0 litres

Average consumption per 100 km: 0.0 litres
Average consumption per 1 hour: 0.0 litres
### Vehicle Daily Activity Per Month

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Starting</th>
<th>Work Finishing</th>
<th>Work Time</th>
<th>Distance (km)</th>
<th>Effective Time</th>
<th>Driving Time</th>
<th>Stand Time</th>
</tr>
</thead>
</table>

### Detailed Idle Time (Parking)

<table>
<thead>
<tr>
<th>Idle Time Beginning</th>
<th>Idle Time Ending</th>
<th>Idle Time Duration</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>05:07:00</td>
<td>05:16:34</td>
<td>00:09:34</td>
<td>25.245501</td>
<td>51.4683</td>
</tr>
<tr>
<td>05:17:02</td>
<td>05:33:39</td>
<td>00:16:06</td>
<td>25.245501</td>
<td>51.4683</td>
</tr>
<tr>
<td>08:53:58</td>
<td>09:08:28</td>
<td>00:14:30</td>
<td>25.245501</td>
<td>51.4683</td>
</tr>
<tr>
<td>09:11:37</td>
<td>09:47:10</td>
<td>00:35:33</td>
<td>25.242701</td>
<td>51.472801</td>
</tr>
<tr>
<td>09:52:55</td>
<td>10:08:23</td>
<td>00:15:28</td>
<td>25.242701</td>
<td>51.472801</td>
</tr>
<tr>
<td>10:10:44</td>
<td>10:19:30</td>
<td>00:08:46</td>
<td>25.245399</td>
<td>51.4683</td>
</tr>
<tr>
<td>10:41:58</td>
<td>11:12:46</td>
<td>00:30:48</td>
<td>25.2428</td>
<td>51.4729</td>
</tr>
</tbody>
</table>
### Driving Safety, Eco-Driving and Drivers Rating

<table>
<thead>
<tr>
<th>Driver</th>
<th>Work Time hour:min</th>
<th>Overspeed Driving %</th>
<th>Mileage km</th>
<th>Speed</th>
<th>Acceleration</th>
<th>Deceleration</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Max km/h</td>
<td>Avg km/h</td>
<td>Max m/s²</td>
<td>Avg m/s²</td>
</tr>
<tr>
<td>Ken Kenny</td>
<td>46.29</td>
<td>6</td>
<td>2880.2</td>
<td>116.0</td>
<td>71.3</td>
<td>2.15</td>
<td>0.25</td>
</tr>
<tr>
<td>Ron1 Ron1</td>
<td>23:53</td>
<td>0</td>
<td>967.5</td>
<td>104.5</td>
<td>52.9</td>
<td>1.85</td>
<td>0.30</td>
</tr>
<tr>
<td>Brunei 4 FES</td>
<td>2.33</td>
<td>0</td>
<td>93.3</td>
<td>95.5</td>
<td>40.5</td>
<td>1.65</td>
<td>0.20</td>
</tr>
<tr>
<td>RON 2 FES</td>
<td>0:00</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Ivanov Alexey</td>
<td>0:00</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>RON RON</td>
<td>0:00</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Vehicle Eco-Driving and Safety Driving

<table>
<thead>
<tr>
<th>Report TimePeriod: 01 Sep 2014 00:00 – 30 Sep 2014 23:59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Created: 16 Oct 2014 15:51</td>
</tr>
<tr>
<td>Total Trips: 311</td>
</tr>
</tbody>
</table>

**Mon, 01 Sep 2014**

<table>
<thead>
<tr>
<th>Driver</th>
<th>Time</th>
<th>Durations</th>
<th>Distance</th>
<th>Speed km/h</th>
<th>Acceleration m/s²</th>
<th>Deceleration m/s²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ron1 Ron1</td>
<td>08:09:49 - 08:19:17</td>
<td>00:09:28</td>
<td>3.51</td>
<td>62.00</td>
<td>0.51</td>
<td>1.15</td>
</tr>
<tr>
<td></td>
<td>08:40:54 - 08:43:23</td>
<td>00:02:29</td>
<td>0.60</td>
<td>46.50</td>
<td>0.53</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td>10:11:37 - 10:13:11</td>
<td>00:01:34</td>
<td>0.10</td>
<td>24.00</td>
<td>0.64</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>10:33:39 - 11:03:36</td>
<td>00:29:56</td>
<td>1.25</td>
<td>39.50</td>
<td>0.62</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>14:10:33 - 15:10:45</td>
<td>00:01:12</td>
<td>31.97</td>
<td>99.50</td>
<td>0.57</td>
<td>1.55</td>
</tr>
<tr>
<td>Ron1 Ron1</td>
<td>17:14:10 - 17:32:36</td>
<td>00:18:26</td>
<td>2.83</td>
<td>58.50</td>
<td>1.67</td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99.50</td>
<td>0.75</td>
<td>1.55</td>
</tr>
</tbody>
</table>

Total Trips: 6
### Fleet: Speed Violation Overview

<table>
<thead>
<tr>
<th>Driver</th>
<th>Date</th>
<th>Durations</th>
<th>Speed km/h</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenny Ken</td>
<td>Br, 16 сен 2014, 18:42:28</td>
<td>00:01:00</td>
<td>10</td>
<td>4.967330; 114.884708</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Br, 16 сен 2014, 18:45:11</td>
<td>00:00:40</td>
<td>10</td>
<td>4.983040; 114.902664</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Br, 16 сен 2014, 18:51:16</td>
<td>00:00:35</td>
<td>2</td>
<td>4.990280; 114.970078</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Br, 16 сен 2014, 18:53:41</td>
<td>00:00:40</td>
<td>2</td>
<td>5.000880; 114.999962</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Br, 16 сен 2014, 18:54:56</td>
<td>00:00:40</td>
<td>4</td>
<td>5.024330; 115.010925</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Cr, 17 сен 2014, 00:58:34</td>
<td>00:00:40</td>
<td>14</td>
<td>4.988310; 114.920853</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Cr, 17 сен 2014, 16:57:08</td>
<td>00:00:40</td>
<td>6</td>
<td>4.680320; 114.244924</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Cr, 17 сен 2014, 17:52:48</td>
<td>00:00:45</td>
<td>7</td>
<td>4.832380; 114.751640</td>
</tr>
<tr>
<td>Kenny Ken</td>
<td>Cr, 17 сен 2014, 17:53:58</td>
<td>00:00:55</td>
<td>2</td>
<td>4.836200; 114.768616</td>
</tr>
</tbody>
</table>

### Fleet: Acceleration/Deceleration Violation Overview

<table>
<thead>
<tr>
<th>Driver</th>
<th>Date</th>
<th>Acceleration m/s²</th>
<th>Deceleration m/s²</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ron1</td>
<td>Bс, 31 авг 2014, 16:16:39</td>
<td>1.55</td>
<td></td>
<td>4.577730; 114.204803</td>
</tr>
<tr>
<td></td>
<td>Bс, 31 авг 2014, 22:12:08</td>
<td>1.55</td>
<td></td>
<td>4.571930; 114.202667</td>
</tr>
<tr>
<td></td>
<td>Bс, 31 авг 2014, 22:36:03</td>
<td>1.70</td>
<td></td>
<td>4.597680; 114.276459</td>
</tr>
<tr>
<td></td>
<td>Bс, 31 авг 2014, 22:43:13</td>
<td>1.65</td>
<td></td>
<td>4.617760; 114.324951</td>
</tr>
<tr>
<td></td>
<td>Bс, 31 авг 2014, 23:02:13</td>
<td>1.65</td>
<td></td>
<td>4.591250; 114.257507</td>
</tr>
<tr>
<td></td>
<td>Bс, 31 авг 2014, 23:03:08</td>
<td>1.90</td>
<td></td>
<td>4.588630; 114.249687</td>
</tr>
</tbody>
</table>
About Monitoring Software and Monitoring Service
(Some Samples)

### Trip Overview

**Report Time Period:** 01 Sep 2014 00:00 – 30 Sep 2014 23:59
**Report Created:** 16 Oct 2014 15:51
**Total Trips:** 311

**Mon, 01 Sep 2014**

<table>
<thead>
<tr>
<th>Driver</th>
<th>Time</th>
<th>Durations</th>
<th>Distance</th>
<th>Speed km/h</th>
<th>Acceleration m/s²</th>
<th>Deceleration m/s²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ron1</td>
<td>08:09:49 - 08:19:17</td>
<td>00:09:28</td>
<td>3.51</td>
<td>62.00</td>
<td>1.15</td>
<td>1.55</td>
</tr>
<tr>
<td></td>
<td>08:40:54 - 08:43:23</td>
<td>00:02:29</td>
<td>0.60</td>
<td>46.50</td>
<td>0.53</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>10:11:37 - 10:13:11</td>
<td>00:01:34</td>
<td>0.10</td>
<td>24.00</td>
<td>0.64</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>10:33:39 - 11:03:35</td>
<td>00:29:56</td>
<td>1.25</td>
<td>39.50</td>
<td>0.62</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>14:10:33 - 15:10:45</td>
<td>01:00:12</td>
<td>31.97</td>
<td>99.50</td>
<td>0.57</td>
<td>1.55</td>
</tr>
<tr>
<td>Ron1</td>
<td>17:14:10 - 17:32:36</td>
<td>00:18:26</td>
<td>2.83</td>
<td>58.50</td>
<td>1.67</td>
<td>1.30</td>
</tr>
</tbody>
</table>

**Total Trips:** 6

**Time:** 02:02:05 | 40.28 | 99.50 | 0.75 | 1.55 | 0.35 | 2.10 | 0.38

### Vehicle Utilization Report

**Vehicle Name:** Toyota Hilux
**Plate Number:** BAM6076
**Time Period:** 17 сент 2014 00:00 – 17 сент 2014 23:59

**Operating Period (Calendar Days):** 0
**Operating Days per Period:** 1
**Distance:** 231.092 km
**Summary Working Time (hh:mm:ss):** 23:59:54
**Summary Effective Time (hh:mm:ss):** 4:13:03

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Start - Work Finish</th>
<th>Work Time</th>
<th>Work Time %</th>
<th>Distance (km)</th>
<th>Effective Time</th>
<th>Effectivity %</th>
<th>Driving Time</th>
<th>Stand Time</th>
<th>Parking (pcs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-09-2014</td>
<td>0:00:00 - 23:59:54</td>
<td>23:59:54</td>
<td>1E2</td>
<td>231.09</td>
<td>4:13:03</td>
<td>18</td>
<td>3:58:03</td>
<td>0:15:00</td>
<td>16</td>
</tr>
</tbody>
</table>
About Monitoring Software and Monitoring Service
Road Tanker: Fuel Compartments Unloading

GuardMagic
vehicle and fuel monitoring
GuardMagic
Office PC based Monitoring.
(Complete Solution)
About VehicleStation, FleetStation Monitoring Software

Vehicle Station and FleetStation are the series of a special program intended for “Real Time” mobiles and stationary objects monitoring (All-In-One monitoring software).

VehicleStation (FleetStation) give you secure access to all your vehicles in any part of the world. Monitoring software located in your office server (office PC) and all information about your vehicle located only in your office.

VehicleStation (FleetStation) monitoring software gives the following:
- Online tracking of your vehicles 24/7/365;
- Monitor trailers and your drivers;
- Overview of trips, parking and stop times;
- Online fuel monitoring;
- Online temperature monitoring;
- Generation different reports and graphs;
- Easy reporting;
- Comfortable monitoring center configuration;
- Data storage up to: depend only of your wishes (hard drive size).
About VehicleStation, FleetStation Monitoring Software

Monitor: Vehicle, Driver, Trailer
About VehicleStation, FleetStation Monitoring Software

Main Operation Window
WEB Based Monitoring. (PowerTrace Monitoring Service)
About PowerTrace Monitoring Service

WEB based PowerTrace monitoring service give you 24-hour secure access to all your vehicle from any PC in any part of the world.

WEB based system does NOT require any software installation or any your support of system operation. The only requisite is a computer with internet access.

Powerful PowerTrace web based vehicle monitoring service give the following:
- Online tracking of your vehicles 24/7/365;
- Overview of trips, parking and stop times;
- Geofencing institution;
- Online Fuel monitoring;
- Generation different reports and graphs;
- Automatic reporting;
- Alerts and warning sending;
- Data storage up to 15 months;
- Information downloaded in XML, CSV for management information;
- Online monitoring via Smartphone.

Source: www.guardmagic.com